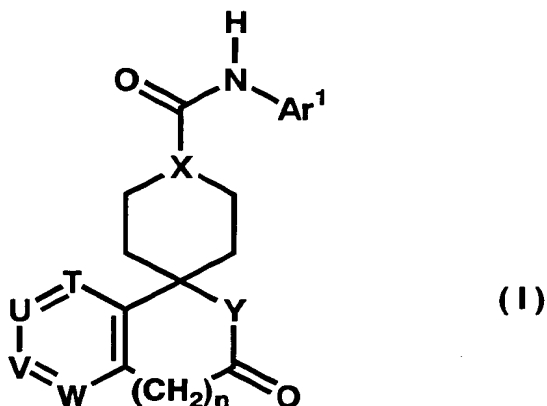


[Claims]

1. A compound represented by the general formula (I):



wherein Ar¹ represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of halogen, nitro, lower alkyl, halo(lower)alkyl, hydroxy(lower)alkyl, cyclo(lower)alkyl, lower alkenyl, lower alkoxy, halo(lower)alkoxy, lower alkylthio, carboxyl, lower alkanoyl, lower alkoxycarbonyl, lower alkylene optionally substituted with oxo, and a group represented by the formula -Q-Ar²;

Ar² represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of halogen, cyano, lower alkyl, halo(lower)alkyl, hydroxy(lower)alkyl, hydroxy, lower alkoxy, halo(lower)alkoxy, lower alkylamino, di-lower alkylamino, lower alkanoyl and aryl;

n represents 0 or 1;

Q represents a single bond or carbonyl;

T, U, V and W each independently represent a nitrogen atom or a methine group which may have a substituent selected from the group consisting of halogen, lower alkyl, hydroxy and lower alkoxy, wherein at least two of which represent said

methine group;

X represents methine or hydroxy substituted methine;

Y represents an imino which may be substituted with lower alkyl, or oxygen; and

5 a salt, ester or N-oxide derivative thereof.

2. The compound of Claim 1, wherein the aryl in Ar¹ is phenyl.

3. The compound of Claim 1, wherein the heteroaryl in Ar¹ is pyrrolyl, imidazolyl, pyrazolyl, thiazolyl,
10 oxazolyl, isoxazolyl, 1,2,3-triazolyl, 1,2,4-thiadiazolyl, pyridyl, pyrazinyl, pyrimidinyl, 1,2,4-triazinyl, benzoxazolyl, benzothiazolyl, quinolyl or pyrido[3,2-b]pyridyl.

4. The compound of Claim 1, wherein each of T, U, V
15 and W is methine which may have a substituent selected from the group consisting of halogen, lower alkyl, hydroxy and lower alkoxy.

5. The compound of Claim 4, wherein each of T, U, V and W is methine which may be substituted with halogen.

20 6. The compound of Claim 1, wherein one of T, U, V and W is nitrogen.

7. The compound of Claim 6 which is a N-oxide derivative.

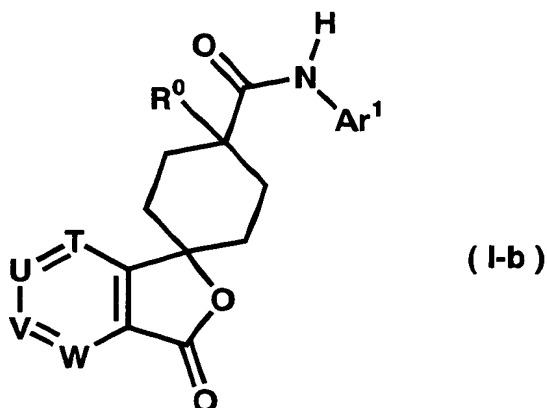
8. The compound of Claim 1, wherein X is hydroxy
25 substituted methine.

9. The compound of Claim 1, wherein Y is an unsubstituted imino or oxygen.

10. The compound of Claim 1, wherein Y is oxygen.

11. The compound of Claim 1 which is represented by

the general formula (I-b):



wherein Ar¹ represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of halogen, nitro, lower alkyl, halo(lower)alkyl, hydroxy(lower)alkyl, cyclo(lower)alkyl, lower alkenyl, lower alkoxy, halo(lower)alkoxy, lower alkylthio, carboxyl, lower alkanoyl, lower alkoxycarbonyl, lower alkylene optionally substituted with oxo, and a group represented by the formula -Q-Ar²;

Ar² represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of halogen, cyano, lower alkyl, halo(lower)alkyl, hydroxy(lower)alkyl, hydroxy, lower alkoxy, halo(lower)alkoxy, lower alkylamino, di-lower alkylamino, lower alkanoyl and aryl;

Q represents a single bond or carbonyl;

R⁰ represents hydrogen or hydroxy;

T, U, V and W each independently represent a nitrogen atom or a methine group which may have a substituent selected from the group consisting of halogen, lower alkyl, hydroxy and lower alkoxy, wherein at least two of which represent said methine group.

12. The compound of Claim 11, wherein the aryl in Ar¹ is phenyl.

13. The compound of Claim 11, wherein the heteroaryl in Ar¹ is pyrrolyl, imidazolyl, pyrazolyl, thiazolyl, oxazolyl, isoxazolyl, 1,2,3-triazolyl, 1,2,4-thiadiazolyl, pyridyl, pyrazinyl, pyrimidinyl or 1,2,4-triazinyl.

14. The compound of Claim 11, wherein one of T, U, V and W is nitrogen.

15. The compound of Claim 14 which is a N-oxide derivative.

16. The compound of Claim 11, wherein V is nitrogen and each of T, U and W is an unsubstituted methine group.

17. The compound of claim 1, which is
cis-N-(4-benzoylphenyl)-4-hydroxy-3'-
oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-
carboxamide,
trans-N-[5-(4-hydroxyphenyl)-2-pyrazinyl]-3'-
oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-
carboxamide,
cis-4-hydroxy-3'-oxo-N-(5-phenyl-2-
pyrazinyl)spiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-
carboxamide,
cis-4-hydroxy-N-[5-(4-hydroxyphenyl)-2-pyrazinyl]-3'-
oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-
carboxamide,
trans-N-[1-(4-hydroxyphenyl)-4-imidazolyl]-3'-
oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-
carboxamide,
cis-4-hydroxy-3'-oxo-N-(1-phenyl-4-

- imidazolyl)spiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxamide,
- cis-4-hydroxy-N-[1-(4-hydroxyphenyl)-4-imidazolyl]-3'-oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-
- 5 carboxamide,
- trans-N-[5-(4-hydroxyphenyl)-2-pyrimidinyl]-3'-oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxamide,
- cis-4-hydroxy-3'-oxo-N-(5-phenyl-2-pyrimidinyl)-
- 10 spiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxamide,
- cis-4-hydroxy-3'-oxo-N-[5-(4-hydroxyphenyl)-2-pyrimidinyl]-spiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxamide,
- 15 cis-N-[1-(3,5-difluorophenyl)-4-imidazolyl]-4-hydroxy-3'-oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxamide,
- cis-4-hydroxy-3'-oxo-N-(5-phenyl-3-pyrazolyl)spiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-
- 20 carboxamide,
- cis-N-[1-(2-fluorophenyl)-4-imidazolyl]-4-hydroxy-3'-oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxamide,
- cis-N-(4-acetyl-3-trifluoromethylphenyl)-4-hydroxy-3'-
- 25 oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxamide,
- cis-4-hydroxy-3'-oxo-N-[1-(3-quinolyl)-4-imidazolyl]spiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxamide,

cis-N-[1-(3-cyanophenyl)-4-imidazolyl]-4-hydroxy-3'-
 oxospiro[cyclohexane-1,1'(3'H)-isobenzofuran]-4-carboxam
 ide,
 cis-N-(4-benzoylphenyl)-4'-hydroxy-3-oxospiro[4-
 5 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 cis-4'-hydroxy-3-oxo-N-(5-phenyl-2-pyrazinyl)spiro[4-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 trans-3-oxo-N-(5-phenyl-2-pyrazinyl)spiro[4-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 10 4-oxide,
 cis-4'-hydroxy-3-oxo-N-(5-phenyl-2-pyrazinyl)spiro[4-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 4-oxide,
 cis-4'-hydroxy-3-oxo-N-(3-phenyl-5-isoxazolyl)spiro[4-
 15 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 trans-3-oxo-N-(3-phenyl-5-isoxazolyl)spiro[4-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 4-oxide,
 cis-4'-hydroxy-3-oxo-N-(5-phenyl-2-pyrimidinyl)spiro[4-
 20 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 4-oxide,
 cis-N-(4-benzoylphenyl)-4'-hydroxy-3-oxospiro[5-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 trans-N-(4-benzoylphenyl)-3-oxospiro[5-azaisobenzofuran-
 25 1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide,
 cis-N-(4-benzoylphenyl)-4'-hydroxy-3-oxospiro[5-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 5-oxide,
 cis-N-(4-benzoylphenyl)-4'-hydroxy-3-oxospiro[6-

- azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
trans-N-(4-benzoylphenyl)-3-oxospiro[6-azaisobenzofuran-
1(3H),1'-cyclohexane]-4'-carboxamide 6-oxide,
cis-N-(4-benzoylphenyl)-4'-hydroxy-3-oxospiro[6-
5 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide,
cis-4'-hydroxy-3-oxo-N-(5-phenyl-2-pyrimidinyl)spiro[5-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
trans-3-oxo-N-(5-phenyl-2-pyrimidinyl)spiro[5-
10 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
5-oxide,
cis-4'-hydroxy-3-oxo-N-(5-phenyl-2-pyrimidinyl)spiro[5-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
5-oxide,
15 cis-N-[5-(3-fluorophenyl)-2-pyrimidinyl]-4'-hydroxy-3-
oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide,
trans-N-[5-(3-fluorophenyl)-2-pyrimidinyl]-3-oxospiro[5-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
20 5-oxide,
cis-N-[5-(3-fluorophenyl)-2-pyrimidinyl]-4'-hydroxy-3-
oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 5-oxide,
cis-N-[5-(2-fluorophenyl)-2-pyrimidinyl]-4'-hydroxy-3-
25 oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide,
trans-N-[5-(2-fluorophenyl)-2-pyrimidinyl]-3-oxospiro[5-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
5-oxide,

cis-N-[5-(2-fluorophenyl)-2-pyrimidinyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide,
 cis-4'-hydroxy-3-oxo-N-(4-phenyl-2-oxazolyl)spiro[5-
 5 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 trans-3-oxo-N-(4-phenyl-2-oxazolyl)spiro[5-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 5-oxide,
 cis-4'-hydroxy-3-oxo-N-(4-phenyl-2-oxazolyl)spiro[5-
 10 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 5-oxide,
 cis-N-[5-(2-methylphenyl)-2-pyrimidinyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 15 trans-N-[5-(2-methylphenyl)-2-pyrimidinyl]-3-oxospiro[5-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 5-oxide,
 cis-N-[5-(2-methylphenyl)-2-pyrimidinyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 20 carboxamide 5-oxide,
 cis-N-[5-(3-methylphenyl)-2-pyrimidinyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 trans-N-[5-(3-methylphenyl)-2-pyrimidinyl]-3-oxospiro[5-
 25 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 5-oxide,
 cis-N-[5-(3-methylphenyl)-2-pyrimidinyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide,

cis-N-[5-(3-fluoromethoxyphenyl)-2-pyrimidinyl]-4'-
 hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-
 cyclohexane]-4'-carboxamide,
 trans-N-[5-(3-fluoromethoxyphenyl)-2-pyrimidinyl]-3-
 5 oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 carboxamide 5-oxide,
 cis-N-[5-(3-fluoromethoxyphenyl)-2-pyrimidinyl]-4'-
 hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-
 cyclohexane]-4'-carboxamide 5-oxide,
 10 cis-N-[5-(3-fluoromethylphenyl)-2-pyrimidinyl]-4'-
 hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-
 cyclohexane]-4'-carboxamide,
 trans-N-[5-(3-fluoromethylphenyl)-2-pyrimidinyl]-3-
 oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 15 carboxamide 5-oxide,
 cis-N-[5-(3-fluoromethylphenyl)-2-pyrimidinyl]-4'-
 hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-
 cyclohexane]-4'-carboxamide 5-oxide,
 cis-N-[5-(3-fluoro-5-methoxyphenyl)-2-pyrimidinyl]-4'-
 20 hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-
 cyclohexane]-4'-carboxamide,
 trans-N-[5-(3-fluoro-5-methoxyphenyl)-2-pyrimidinyl]-3-
 oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 carboxamide 5-oxide,
 25 cis-N-[5-(3-fluoro-5-methoxyphenyl)-2-pyrimidinyl]-4'-
 hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-
 cyclohexane]-4'-carboxamide 5-oxide,
 cis-N-[5-(2-fluoro-5-methylphenyl)-2-pyrimidinyl]-4'-
 hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-

cyclohexane]-4'-carboxamide,
trans-N-[5-(2-fluoro-5-methylphenyl)-2-pyrimidinyl]-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide,
5 cis-N-[5-(2-fluoro-5-methylphenyl)-2-pyrimidinyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide,
cis-N-[4-(3-fluoromethoxyphenyl)-2-oxazolyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
10 trans-N-[4-(3-fluoromethoxyphenyl)-2-oxazolyl]-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide,
cis-N-[4-(3-fluoromethoxyphenyl)-2-oxazolyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide,
15 cis-4'-hydroxy-N-[5-(3-hydroxymethylphenyl)-2-pyrimidinyl]-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
20 trans-N-[5-(3-hydroxymethylphenyl)-2-pyrimidinyl]-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide,
cis-4'-hydroxy-N-[5-(3-hydroxymethylphenyl)-2-pyrimidinyl]-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide,
25 cis-4'-hydroxy-N-[5-(3-hydroxyphenyl)-2-pyrimidinyl]-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
trans-N-[5-(3-hydroxyphenyl)-2-pyrimidinyl]-3-

- oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 5-oxide,
cis-4'-hydroxy-N-[5-(3-hydroxyphenyl)-2-pyrimidinyl]-3-
oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
5 carboxamide 5-oxide,
cis-4'-hydroxy-3-oxo-N-(5-phenyl-2-pyrimidinyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
trans-3-oxo-N-(5-phenyl-2-pyrimidinyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
10 6-oxide,
cis-4'-hydroxy-3-oxo-N-(5-phenyl-2-pyrimidinyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide,
cis-N-[5-(3-fluoromethylphenyl)-2-pyrimidinyl]-4'-
15 hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-
cyclohexane]-4'-carboxamide,
trans-N-[5-(3-fluoromethylphenyl)-2-pyrimidinyl]-3-
oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 6-oxide,
20 cis-N-[5-(3-fluoromethylphenyl)-2-pyrimidinyl]-4'-
hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-
cyclohexane]-4'-carboxamide 6-oxide,
cis-N-[5-(3-fluoromethoxyphenyl)-2-pyrimidinyl]-4'-
hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-
25 cyclohexane]-4'-carboxamide,
trans-N-[5-(3-fluoromethoxyphenyl)-2-pyrimidinyl]-3-
oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 6-oxide,
cis-N-[5-(3-fluoromethoxyphenyl)-2-pyrimidinyl]-4'-

hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-
cyclohexane]-4'-carboxamide 6-oxide,
cis-4'-hydroxy-3-oxo-N-(6-phenyl-1,2,4-triazin-3-
yl)spiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
5 carboxamide,
trans-3-oxo-N-(6-phenyl-1,2,4-triazin-3-yl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide,
cis-4'-hydroxy-3-oxo-N-(6-phenyl-1,2,4-triazin-3-
10 yl)spiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 6-oxide,
cis-N-[5-(2-difluoromethoxyphenyl)-3-pyrazolyl]-4'-
hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-
cyclohexane]-4'-carboxamide,
15 trans-N-[5-(2-difluoromethoxyphenyl)-3-pyrazolyl]-3-
oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 6-oxide,
cis-N-[5-(2-difluoromethoxyphenyl)-3-pyrazolyl]-4'-
hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-
20 cyclohexane]-4'-carboxamide 6-oxide,
cis-N-[5-(3-difluoromethoxyphenyl)-3-pyrazolyl]-4'-
hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-
cyclohexane]-4'-carboxamide,
trans-N-[5-(3-difluoromethoxyphenyl)-3-pyrazolyl]-3-
25 oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 6-oxide,
cis-N-[5-(3-difluoromethoxyphenyl)-3-pyrazolyl]-4'-
hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-
cyclohexane]-4'-carboxamide 6-oxide,

cis-N-[5-(3-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

trans-N-[5-(3-fluorophenyl)-3-pyrazolyl]-3-oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 6-oxide,

cis-N-[5-(3-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 6-oxide,

cis-N-[5-(4-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

trans-N-[5-(4-fluorophenyl)-3-pyrazolyl]-3-oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 6-oxide,

cis-N-[5-(4-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 6-oxide,

cis-N-(4-benzoylphenyl)-4'-hydroxy-3-oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

trans-N-(4-benzoylphenyl)-3-oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 7-oxide,

cis-N-(4-benzoylphenyl)-4'-hydroxy-3-oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 7-oxide,

cis-N-[1-(3,5-difluorophenyl)-4-imidazolyl]-4'-hydroxy-3-oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

trans-N-[1-(3,5-difluorophenyl)-4-imidazolyl]-3-

oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 carboxamide 7-oxide,
 cis-N-[1-(3,5-difluorophenyl)-4-imidazolyl]-4'-hydroxy-3
 -oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 5 carboxamide 7-oxide,
 cis-4'-hydroxy-3-oxo-N-[2-phenyl-4-pyridyl]spiro[7-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 trans-3-oxo-N-[2-phenyl-4-pyridyl]spiro[7-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 10 7-oxide,
 cis-4'-hydroxy-3-oxo-N-[2-phenyl-4-pyridyl]spiro[7-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 7-oxide,
 cis-4'-hydroxy-3-oxo-N-(1-phenyl-4-pyrazolyl)spiro[7-
 15 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 trans-3-oxo-N-(1-phenyl-4-pyrazolyl)spiro[7-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 7-oxide,
 cis-4'-hydroxy-3-oxo-N-(1-phenyl-4-pyrazolyl)spiro[7-
 20 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 7-oxide,
 cis-4'-hydroxy-3-oxo-N-(1-phenyl-3-pyrrolyl)spiro[7-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 trans-3-oxo-N-(1-phenyl-3-pyrrolyl)spiro[7-
 25 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 7-oxide,
 cis-4'-hydroxy-3-oxo-N-(1-phenyl-3-pyrrolyl)spiro[7-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 7-oxide,

cis-N-[1-(4-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

trans-N-[1-(4-fluorophenyl)-3-pyrazolyl]-3-oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
5 7-oxide,

cis-N-[1-(4-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 7-oxide,

10 cis-4'-hydroxy-3-oxo-N-(1-phenyl-3-pyrazolyl)spiro[4-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
trans-3-oxo-N-(1-phenyl-3-pyrazolyl)spiro[4-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
4-oxide,

15 cis-4'-hydroxy-3-oxo-N-(1-phenyl-3-pyrazolyl)spiro[4-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
4-oxide,

cis-4'-hydroxy-3-oxo-N-(1-phenyl-4-pyrazolyl)spiro[4-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

20 trans-3-oxo-N-(1-phenyl-4-pyrazolyl)spiro[4-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
4-oxide,

cis-4'-hydroxy-3-oxo-N-(1-phenyl-4-pyrazolyl)spiro[4-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide

25 4-oxide,

cis-N-[1-(3-fluorophenyl)-4-pyrazolyl]-4'-hydroxy-3-oxospiro[4-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

trans-N-[1-(3-fluorophenyl)-4-pyrazolyl]-3-oxospiro[4-

azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 4-oxide,
 cis-N-[1-(3-fluorophenyl)-4-pyrazolyl]-4'-hydroxy-3-
 oxospiro[4-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 5 carboxamide 4-oxide,
 cis-4'-hydroxy-3-oxo-N-(1-phenyl-3-pyrazolyl)spiro[6-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,
 trans-3-oxo-N-(1-phenyl-3-pyrazolyl)spiro[6-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 10 6-oxide,
 cis-4'-hydroxy-3-oxo-N-(1-phenyl-3-pyrazolyl)spiro[6-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 6-oxide,
 cis-N-[1-(4-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-
 15 oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 carboxamide,
 trans-N-[1-(4-fluorophenyl)-3-pyrazolyl]-3-oxospiro[6-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 6-oxide,
 20 cis-N-[1-(4-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-
 oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 carboxamide 6-oxide,
 trans-N-[1-(2-fluoro-4-hydroxyphenyl)-3-pyrazolyl]-3-
 oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 25 carboxamide,
 cis-N-[1-(2-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-
 oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 carboxamide,
 trans-N-[1-(2-fluorophenyl)-3-pyrazolyl]-3-oxospiro[6-

azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide,

cis-N-[1-(2-fluoro-4-hydroxyphenyl)-3-pyrazolyl]-4'-
hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-

5 cyclohexane]-4'-carboxamide,

trans-N-[1-(2-fluoro-4-hydroxyphenyl)-3-pyrazolyl]-3-
oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 6-oxide,

cis-N-[1-(2-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-
10 oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 6-oxide,

cis-N-[1-(2-fluoro-4-hydroxyphenyl)-3-pyrazolyl]-4'-
hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-
cyclohexane]-4'-carboxamide 6-oxide,

15 cis-4'-hydroxy-3-oxo-N-(5-phenyl-1,2,4-thiadiazol-3-
yl)spiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide,

trans-3-oxo-N-(5-phenyl-1,2,4-thiadiazol-3-yl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
20 6-oxide,

cis-4'-hydroxy-3-oxo-N-(5-phenyl-1,2,4-thiadiazol-3-
yl)spiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 6-oxide,

cis-4'-hydroxy-3-oxo-N-(5-phenyl-3-isoxazolyl)spiro[6-
25 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

trans-3-oxo-N-(5-phenyl-3-isoxazolyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide,

cis-4'-hydroxy-3-oxo-N-(5-phenyl-3-isoxazolyl)spiro[6-

azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide,

cis-4'-hydroxy-3-oxo-N-(6-phenyl-3-pyridyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

5 trans-3-oxo-N-(6-phenyl-3-pyridyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide,

cis-4'-hydroxy-3-oxo-N-(6-phenyl-3-pyridyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide

10 6-oxide,

cis-4'-hydroxy-3-oxo-N-(2-phenyl-3-thiazolyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide,

trans-3-oxo-N-(2-phenyl-3-thiazolyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide

15 6-oxide,

cis-4'-hydroxy-3-oxo-N-(2-phenyl-3-thiazolyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide,

cis-4'-hydroxy-3-oxo-N-(2-phenyl-1,2,3-triazol-4-
20 yl)spiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide,

trans-3-oxo-N-(2-phenyl-1,2,3-triazol-4-yl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide

25 or

cis-4'-hydroxy-3-oxo-N-(2-phenyl-1,2,3-triazol-4-
yl)spiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 6-oxide.

18. The compound of claim 1, which is

cis-N-[5-(3-fluorophenyl)-2-pyrimidinyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.

19. The compound of claim 1, which is
5 trans-N-[5-(3-fluorophenyl)-2-pyrimidinyl]-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide.

20. The compound of claim 1, which is
10 cis-N-[5-(2-fluorophenyl)-2-pyrimidinyl]-4'-hydroxy-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.

21. The compound of claim 1, which is
15 trans-N-[5-(2-fluorophenyl)-2-pyrimidinyl]-3-oxospiro[5-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 5-oxide.

22. The compound of claim 1, which is
~~trans-N-[5-(2-difluoromethoxyphenyl)-3-pyrazolyl]-3-oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.~~

20 23. The compound of claim 1, which is
cis-N-[5-(2-difluoromethoxyphenyl)-3-pyrazolyl]-4'-hydroxy-3-oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.

24. The compound of claim 1, which is
25 trans-N-[5-(2-difluoromethoxyphenyl)-3-pyrazolyl]-3-oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide 6-oxide.

25. The compound of claim 1, which is
cis-N-[1-(3,5-difluorophenyl)-4-imidazolyl]-4'-hydroxy-3

-oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.

26. The compound of claim 1, which is
trans-N-[1-(3,5-difluorophenyl)-4-imidazolyl]-3-
5 oxospiro[7-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide 7-oxide.

27. The compound of claim 1, which is
~~trans-3-oxo-N-[2-phenyl-4-pyridyl]spiro[7-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.~~

10 28. The compound of claim 1, which is
cis-4'-hydroxy-3-oxo-N-[2-phenyl-4-pyridyl]spiro[7-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.

29. The compound of claim 1, which is
trans-3-oxo-N-[2-phenyl-4-pyridyl]spiro[7-
15 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
7-oxide.

30. The compound of claim 1, which is
cis-4'-hydroxy-3-oxo-N-(1-phenyl-3-pyrazolyl)spiro[4-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.

20 31. The compound of claim 1, which is
trans-3-oxo-N-(1-phenyl-3-pyrazolyl)spiro[4-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
4-oxide.

~~32. The compound of claim 1, which is
25 trans-3-oxo-N-(1-phenyl-4-pyrazolyl)spiro[4-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.~~

33. The compound of claim 1, which is
cis-4'-hydroxy-3-oxo-N-(1-phenyl-4-pyrazolyl)spiro[4-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.

34. The compound of claim 1, which is
trans-3-oxo-N-(1-phenyl-4-pyrazolyl)spiro[4-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
4-oxide.

5 ~~35. The compound of claim 1, which is
trans-N-[1-(2-fluorophenyl)-3-pyrazolyl]-3-oxospiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.~~

36. The compound of claim 1, which is
trans-N-[1-(2-fluoro-4-hydroxyphenyl)-3-pyrazolyl]-3-
10 oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
carboxamide.

37. The compound of claim 1, which is
cis-N-[1-(2-fluorophenyl)-3-pyrazolyl]-4'-hydroxy-3-
oxospiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
15 carboxamide.

38. The compound of claim 1, which is
trans-N-[1-(2-fluorophenyl)-3-pyrazolyl]-3-oxospiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide.

20 ~~39. The compound of claim 1, which is
trans-3-oxo-N-(2-phenyl-3-thiazolyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.~~

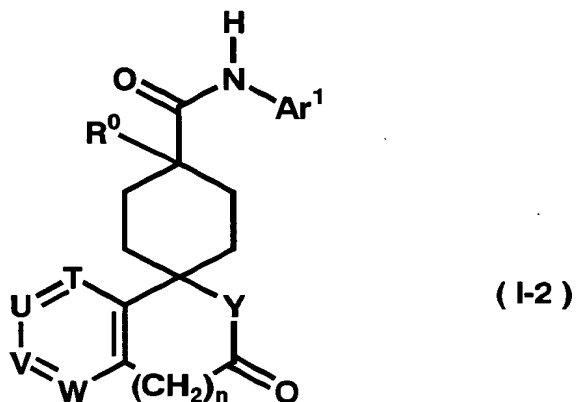
40. The compound of claim 1, which is
cis-4'-hydroxy-3-oxo-N-(2-phenyl-3-thiazolyl)spiro[6-
25 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide.

41. The compound of claim 1, which is
trans-3-oxo-N-(2-phenyl-3-thiazolyl)spiro[6-
azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
6-oxide.

42. The compound of claim 1, which is
 cis-4'-hydroxy-3-oxo-N-(2-phenyl-1,2,3-triazol-4-
 yl)spiro[6-azaisobenzofuran-1(3H),1'-cyclohexane]-4'-
 carboxamide.

5 43. The compound of claim 1, which is
 trans-3-oxo-N-(2-phenyl-1,2,3-triazol-4-yl)spiro[6-
 azaisobenzofuran-1(3H),1'-cyclohexane]-4'-carboxamide
 6-oxide.

10 44. A process for producing a compound of the general
 formula (I-2):



wherein Ar¹ represents an aryl or heteroaryl which may be
 substituted, the substituent being selected from the group
 consisting of halogen, nitro, lower alkyl, halo(lower)alkyl,
 15 hydroxy(lower)alkyl, cyclo(lower)alkyl, lower alkenyl,
 lower alkoxy, halo(lower)alkoxy, lower alkylthio, carboxyl,
 lower alkanoyl, lower alkoxy carbonyl, lower alkylene
 optionally substituted with oxo, and a group represented by
 the formula -Q-Ar²;
 20 Ar² represents an aryl or heteroaryl which may be substituted,
 the substituent being selected from the group consisting of
 halogen, cyano, lower alkyl, halo(lower)alkyl,
 hydroxy(lower)alkyl, hydroxy, lower alkoxy,

halo(lower)alkoxy, lower alkylamino, di-lower alkylamino, lower alkanoyl and aryl;

Q represents a single bond or carbonyl;

R⁰ represents hydrogen or hydroxy;

5 T, U, V and W each independently represent a nitrogen atom or a methine group which may have a substituent selected from the group consisting of halogen, lower alkyl, hydroxy and lower alkoxy, wherein at least two of which represent said methine group;

10 n and Y have the same meanings as described hereinafter; and a salt, ester or N-oxide derivative thereof, which comprises:

reacting a compound of formula (V):

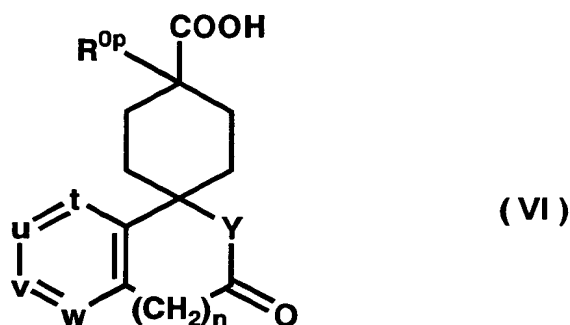


15 wherein Ar^{1p} represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of halogen, nitro, lower alkyl, halo(lower)alkyl, cyclo(lower)alkyl, lower alkenyl, lower alkoxy, halo(lower)alkoxy, lower alkylthio, lower alkanoyl, lower alkoxycarbonyl, a group of formula: -Q^p-Ar^{2p}, and an optionally protected, lower alkylene optionally substituted with oxo, hydroxy(lower)alkyl or carboxyl group;

Ar^{2p} represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of
25 halogen, cyano, lower alkyl, halo(lower)alkyl, lower alkoxy, halo(lower)alkoxy, di-lower alkylamino, lower alkanoyl, aryl, and an optionally protected, hydroxy(lower)alkyl, hydroxy or lower alkyl amino group;

Q^p represents a single bond or optionally protected carbonyl;

with a carboxylic acid of the general formula (VI):



wherein n represents 0 or 1;

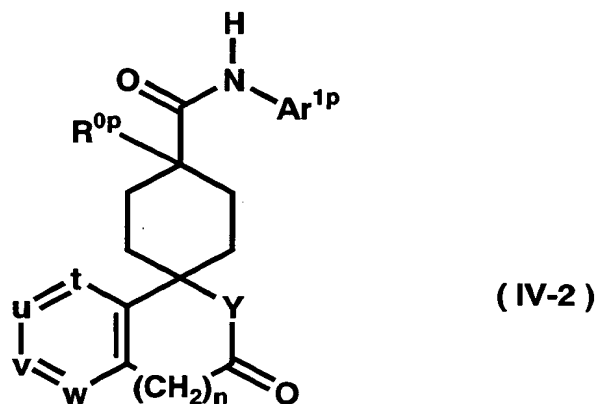
R^{Op} represents hydrogen or optionally protected hydroxy;

5 t, u, v and w each independently represent a nitrogen atom or a methine group which may have a substituent selected from the group consisting of halogen, lower alkyl, lower alkoxy and optionally protected hydroxy, wherein at least two of which represent said methine group;

10 Y represents an imino which may be substituted with a lower alkyl, or oxygen atom;

or a reactive derivative thereof,

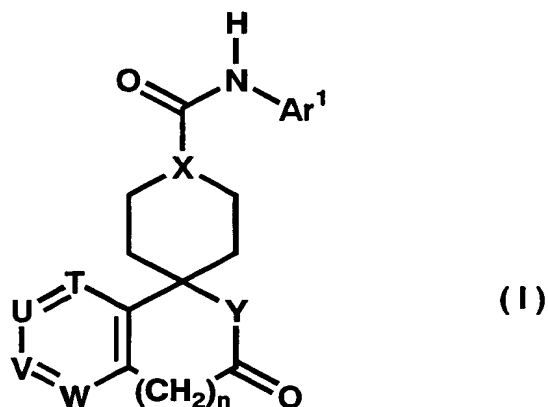
to provide a compound of the general formula (IV-2):



15 wherein Ar^{1p} , n, R^{Op} , t, u, v, w and Y have the same meanings as described above;

optionally followed by elimination of a protecting group and/or oxidation of a nitrogen atom.

45. Neuropeptide Y receptor antagonist which comprises a compound of the general formula (I):



wherein Ar¹ represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of halogen, nitro, lower alkyl, halo(lower)alkyl, hydroxy(lower)alkyl, cyclo(lower)alkyl, lower alkenyl, lower alkoxy, halo(lower)alkoxy, lower alkylthio, carboxyl, lower alkanoyl, lower alkoxy carbonyl, lower alkylene optionally substituted with oxo, and a group represented by the formula -Q-Ar²;

Ar² represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of halogen, cyano, lower alkyl, halo(lower)alkyl, hydroxy(lower)alkyl, hydroxy, lower alkoxy, halo(lower)alkoxy, lower alkylamino, di-lower alkylamino, lower alkanoyl and aryl;

n represents 0 or 1;

Q represents a single bond or carbonyl;

T, U, V and W each independently represent a nitrogen atom or a methine group which may have a substituent selected from the group consisting of halogen, lower alkyl, hydroxy and lower alkoxy, wherein at least two of which represent said

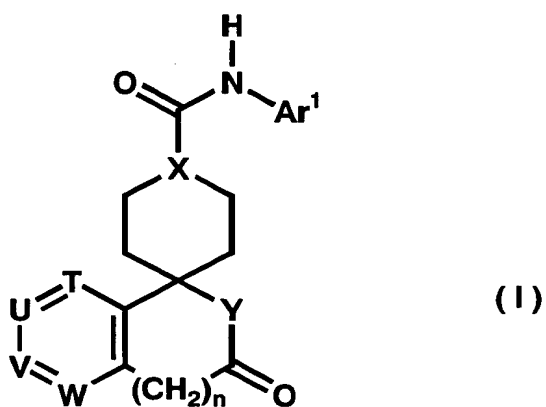
methine group;

X represents methine or hydroxy substituted methine;

Y represents an imino which may be substituted with lower alkyl, or oxygen; and

5 a salt, ester or N-oxide derivative thereof.

46. A method for the treatment of bulimia, obesity or diabetes which comprises administering a therapeutically effective amount of a compound of the general formula (I):



10 wherein Ar¹ represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of halogen, nitro, lower alkyl, halo(lower)alkyl, hydroxy(lower)alkyl, cyclo(lower)alkyl, lower alkenyl, lower alkoxy, halo(lower)alkoxy, lower alkylthio, carboxyl, lower alkanoyl, lower alkoxy carbonyl, lower alkylene optionally substituted with oxo, and a group represented by the formula -Q-Ar²;

Ar² represents an aryl or heteroaryl which may be substituted, the substituent being selected from the group consisting of
20 halogen, cyano, lower alkyl, halo(lower)alkyl, hydroxy(lower)alkyl, hydroxy, lower alkoxy, halo(lower)alkoxy, lower alkylamino, di-lower alkylamino, lower alkanoyl and aryl;

n represents 0 or 1;

Q represents a single bond or carbonyl;

T, U, V and W each independently represent a nitrogen atom
or a methine group which may have a substituent selected from
5 the group consisting of halogen, lower alkyl, hydroxy and
lower alkoxy, wherein at least two of which represent said
methine group;

X represents methine or hydroxy substituted methine;

Y represents an imino which may be substituted with lower
10 alkyl, or oxygen; and

a salt, ester or N-oxide derivative thereof.

47. A pharmaceutical composition for the treatment
of bulimia, obesity or diabetes which comprises a
pharmaceutically effective amount of a compound of claim 1
15 together with a pharmaceutically acceptable additive.